

REMARKS/ARGUMENTS

Claims 1-17 remain in the application for further prosecution. Claims 16 and 17 have been added. Claims 1, 6, 9 and 11 have been amended.

§ 102 Rejections

Claims 1-15 were rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,684,495 to Dyott et al. ("Dyott"). Dyott is directed to providing an improved dielectric rod antenna that is capable of producing gains in excess of 20dB when operated at frequencies at 10 GHz and higher. Dyott, column 1, lines 14-17. Dyott's antenna is composed of a first dielectric waveguide 11 surrounded by a second dielectric waveguide 12. Dyott, column 2, lines 14-15; FIGS. 1-2. As the diameter of the first dielectric waveguide 11 decreases, the field external to the first waveguide expands and is captured by the second dielectric waveguide 12 to form a relatively large antenna aperture. Dyott, column 3, lines 10-13. The presence of the second dielectric waveguide 12 produces a substantial increase in the gain of the antenna due to the larger mode field of the lower-dielectric-constant waveguide. Dyott, column 4, lines 46-49. To achieve the object of the invention specifically disclosed in Dyott, a second dielectric waveguide must surround the first dielectric waveguide and capture the field produced by the first waveguide. This second dielectric waveguide determines the radiation characteristics of the disclosed antenna.

The Applicant's invention does not use a second dielectric waveguide as disclosed by Dyott. In claim 1, the Applicant specifically claims a feed horn where the horn portion and dielectric rod are the primary determinants of the radiation characteristics. In the present application, at high frequencies, the energy is in the dielectric rod, while at low energies, the horn aperture is responsible. Thus, one skilled in the art will recognize that the radiation characteristics

at high frequencies are determined by the dielectric rod and the radiation characteristics at low frequencies are determined by the horn portion. Whereas in Dyott, the second dielectric waveguide is the primary determinant of any radiation characteristic because the second dielectric captures the field produced by the horn and first dielectric waveguide. Thus, claim 1 is not anticipated by Dyott.

Claims 6 and 11 claim a feed horn and method of use where the dielectric rod portion is free of any surrounding dielectric material having a second dielectric constant. Dyott discloses that to produce a substantial increase in the gain of the antenna, a second dielectric waveguide must surround the first dielectric rod and capture the field produced by the rod. Thus, Dyott does not in any way anticipate a device as claimed by the Applicant where the dielectric rod is free of any surrounding dielectric material. As such, claims 6 and 11 are not anticipated by Dyott.

Claim 16 includes each and every limitation present in claim 1 and further incorporates a reflector. As such, claim 16 is believed to be in condition for allowance for at least the same reasons set forth above. Claim 17 includes each and every limitation present in claim 6 and further incorporates a reflector. As such, claim 17 is believed to be in condition for allowance for at least the same reasons set forth above.

Thus, claims 1-17 are believed to be in condition for allowance. Claims 16 and 17 do not add new matter and should also be allowable for at least the same reasons set forth above. Claim 9 has been amended to correct an inadvertent typographical error.

Conclusion

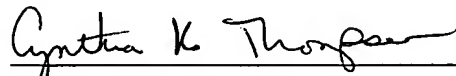
It is the Applicant's belief that all of the claims are now in condition for allowance and action towards that effect is respectfully requested.

Application No. 10/050,525
Amendment "B" dated December 1, 2003
Reply to Office Action dated August 1, 2003

If there are any matters which may be resolved or clarified through a telephone interview,
the Examiner is requested to contact the undersigned attorney at the number indicated.

Respectfully submitted,

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